Mitigation Monitoring and Reporting Program

for the

City of Carlsbad Sewer Master Plan and
Carlsbad Municipal Water District
Water and Recycled Water Master Plans Update
Program Environmental Impact Report (EIR 12-01)
(SCH No. 2012021006)

The environmental mitigation measures listed on the following pages were incorporated into the Conditions of Approval for this project in order to mitigate identified environmental impacts to a level of insignificance. A completed and signed checklist for each mitigation measure indicates that this mitigation measure has been complied with and implemented, and fulfills the City's monitoring requirements with respect to Assembly Bill 3180 (Public Resources Code Section 21081.6).

Additionally, the City and CMWD have incorporated numerous project design features and construction measures into the project design that are included in an effort to reduce the potential for environmental effects. The CIP projects proposed in the Master Plans would incorporate the applicable Project Design Features that are listed at the end of the Mitigation Monitoring and Reporting Program.

Mitigation Measure	Applicable CIP Projects	Monitoring Type	Monitoring Department	Shown on Plans	Verified Implementation	Remarks
BIOLOGICAL RESOURCES						
Bio-1A Project-Level Biological Resource Surveys. During the design phase and prior to the construction of applicable CIP projects, the City and CMWD shall retain a qualified biologist to conduct project-level biological surveys. The surveys shall verify whether the project would occur on or in the immediate vicinity of natural habitat and habitat suitable for special status species. The surveys shall also identify if the project could result in direct or indirect impacts to natural habitat and special status species. The survey results shall be submitted to the City and CMWD to determine the need for further surveys and project-level analyses for subsequent CEQA documentation and the issuance of any discretionary actions or permits for the project. If the Quarry Creek Master Plan project covering CIP projects N-9, 55, and ES7 is ultimately approved and developed, the City and CMWD shall implement the specific mitigation requirements of the Quarry Creek Master Plan EIR (EIR 11-02) accordingly.	Sewer: N-3, N-9, SR-3, SR-9, SR-17, SR-19, SR-22, SR-23 Water: 10, 17, 47, 55 Recycled Water: ES7	Project	Planning Division & Biological Monitor			
Bio-1B HMP Covered Species Surveys and Habitat Mitigation. If it is demonstrated through the implementation of mitigation measure Bio-1A that applicable CIP projects could directly or indirectly impact natural habitat that is suitable for special status species addressed within the Carlsbad HMP, the City and CMWD shall retain a qualified biologist to conduct focused, presence/absence surveys for rare plants and/or protocol-level surveys for special status wildlife species, as determined necessary for subsequent CEQA documentation and the issuance of any discretionary actions or permits for the project. Surveys shall follow protocols and guidelines approved by the USFWS, CDFG, and CNPS, and shall be conducted by qualified biologists permitted by the USFWS and/or CDFG, where applicable, and in accordance with the Carlsbad HMP and Carlsbad Municipal Code.	Sewer: N-3, N-9, SR-3, SR-9, SR-17, SR-19, SR-22, SR-23 Water: 10, 17, 55 Recycled Water: ES7	Project	Planning Division & Biological Monitor			

Explanation of Headings:

Type = Project, ongoing, cumulative.

Monitoring Dept. = Department, or Agency, responsible for monitoring a particular mitigation measure. Shown on Plans = When mitigation measure is shown on plans, this column will be initialed and dated. Verified Implementation = When mitigation measure has been implemented, this column will be initialed and dated.

Remarks = Area for describing status of ongoing mitigation measure, or for other information.

Mitigation Measure	Applicable CIP Projects	Monitoring Type	Monitoring Department	Shown on Plans	Verified Implementation	Remarks
The City and CMWD shall adhere to the HMP permit and general conditions pertaining to HMP habitat and covered species. Impacts to HMP covered species shall be avoided and minimized to the maximum extent practicable in conformance with the Carlsbad HMP and Carlsbad Municipal Code. Impacts to natural habitat shall be mitigated in accordance with mitigation measure Bio-2A.						
Bio-1C CIP Project 47 California Gnatcatcher Surveys and Habitat Mitigation. If it is demonstrated through the implementation of mitigation measure Bio-1A that CIP project 47 could directly or indirectly impact the federally threatened coastal California gnatcatcher, the City and CMWD shall implement the following mitigation measures, at minimum, and in addition to any avoidance, minimization, and conservation measures prescribed by the USFWS during consultation and/or permitting:	Water: 47	Project	Planning Division & Biological Monitor			
 Within one year prior to CIP project construction, the City and CMWD shall retain a permitted biologist to commence focused surveys in accordance with USFWS protocols to determine the presence or absence of the coastal California gnatcatcher. Documentation of the survey results will be provided to the City and CMWD, and USFWS, within 45 days of completing the final survey. 						
2. If the coastal California gnatcatcher could be directly or indirectly impacted then in compliance with FESA, and as stated in Section 2.6.1.1 of this EIR, the City and CMWD shall consult and obtain all applicable regulatory permits and authorizations from the USFWS, and the conditions of the regulatory permits and authorizations will be implemented accordingly and/or the CIP project would be modified to avoid direct "take" of the species and/or minimize adverse affects to the species and occupied habitat.						
3. The City and CMWD shall mitigate the loss of habitat according to mitigation measure Bio-2A.						
Bio-1D Avoidance of Nesting Birds and Raptors. To prevent direct impacts to nesting birds, including raptors, protected under the federal MBTA and CFG Code, the City and CMWD shall enforce the following: Prior to removal or damage of any active nests or any tree pruning or removal operations during the prime nesting seasons, that being from March 15 to May 30, a certified biologist shall survey the trees to determine if there are any active nests within 500 feet of the area of tree removal or pruning. If any active nests are located within 500 feet, no	Sewer: N-3, N-9, SR-3, SR-9, SR-17, SR-19, SR-22, SR-23 Water: 10, 17, 47, 55 Recycled Water: ES7	Project	Planning Division & Biological Monitor			

Balaineai en Bannouro	Angliankla CID Duningto	Monitoring	Monitoring	Shown on	Verified	Damanika
tree pruning or removal operations can occur until the nests are vacated or until the end of the prime breeding season, whichever occurs later. In addition, prior to any tree removal or pruning operations proposed outside of the prime nesting season but within the period of January 15 to September 15, a confirmation is required from a certified biologist that no disturbance to active nests or nesting activities would occur. Documentation from a certified biologist consistent with these requirements shall be submitted to the City Planner for review and approval. A note to this effect shall be placed on the construction plans. Bio-1E Pre-Construction Biological Resource Surveys. Prior to construction of CIP projects or portions of projects that will occur within disturbed or developed land, but will be sited immediately adjacent to an undeveloped open space area (i.e., an area supporting naturalized habitat, sensitive habitat, and/or habitat potentially suitable for special status species), the City and CMWD shall retain a qualified biologist to perform a pre-construction survey to verify existing biological resources adjacent to the project construction areas. The City and CMWD shall provide the biologist with a copy of the CIP project plans that clearly depict the construction work limits, including construction staging and storage areas, in order to determine which specific portion(s) of the project will require inspection of adjacent open space areas during the pre-construction survey. At minimum, the biologist shall perform a visual inspection of the adjacent open space area in order to characterize the existing habitat types and determine the likelihood for special status species to occur, including the coastal California gnatcatcher, migratory songbirds, and other bird species with the potential to breed in the area. The pre-construction survey results shall be submitted to the City and	Sewer: N-3, N-9, SR-3, SR-9, SR-11, SR-12, SR-15, SR-17, SR-19, SR-22, SR-23, I-1 Water: 10, 17, 21, 47, 48, 55, R3, R5 Recycled Water: ES1, ES2, ES5, ES7, ES8, ES9, ES11, ES14, ES17, ES18	Project	Planning Division & Biological Monitor	Plans	Implementation	Remarks
CMWD prior to construction in order to verify the need for the additional construction measures proposed within Bio-1F through Bio-1I below. Bio-1F Orange Construction Fencing. If it is confirmed through the implementation of mitigation measure Bio-1E that the CIP project would	Sewer: N-3, N-9, SR-3, SR-9, SR-11, SR-12, SR-15,	Project	Planning Division & Biological			
occur immediately adjacent to sensitive habitat areas and/or habitat potentially suitable for special status species, the City and CMWD shall retain a qualified biologist to supervise the installation of temporary orange construction fencing, which clearly delineates the edge of the approved limits of grading and clearing, and the edges of environmentally sensitive areas that occur beyond the approved limits. This fencing shall be installed prior to construction, and maintained for the duration of construction activity. Fencing shall be installed in a manner that does not	SR-17, SR-19, SR-22, SR-23, I-1 Water: 10, 17, 21, 47, 48, 55, R3, R5 Recycled Water: ES1, ES2, ES5, ES7, ES8, ES9, ES11, ES14, ES17, ES18		Monitor			

Mitigation Measure	Applicable CIP Projects	Monitoring Type	Monitoring Department	Shown on Plans	Verified Implementation	Remarks
impact habitats to be avoided. If work occurs beyond the fenced or demarcated limits of impact, all work shall cease until the problem has been remedied and mitigation identified. Temporary orange fencing shall be removed upon completion of construction of the project. Implementation of this measure shall be verified by the City prior to and concurrent with construction.						
Bio-1G Construction-Related Noise. Construction noise created during the general breeding season (January 15 to September 15) that could affect the breeding of the coastal California gnatcatcher, migratory songbirds, and other bird species associated with adjacent undeveloped areas shall be avoided. No loud construction noise (exceeding 60 dBA hourly average, adjusted for ambient noise levels, at the nesting site) may take place within 500 feet of active nesting sites during the general breeding season (January 15 through September 15). If it is confirmed through the implementation of mitigation measure Bio-1E that the CIP project could result in construction-related noise impacts to breeding birds during the general breeding season, the City and CMWD shall retain a qualified biologist to monitor the construction operations. The biological monitor shall be present to monitor construction activities that occur adjacent to the undeveloped open space area potentially supporting breeding birds. The monitor shall verify that construction noise levels do not exceed 60 dBA hourly average and shall have the ability to halt construction work, if necessary, and confer with the City, USFWS, and CDFG to ensure the proper implementation of additional protection measures during construction. The biologist shall report any violation to the USFWS and/or CDFG within 24 hours of its occurrence.	SR-9, SR-11, SR-12, SR-15, SR-17, SR-19, SR-22, SR-23, I-1 Water: 10, 17, 21, 47, 48, 55, R3, R5 Recycled Water: ES1, ES2, ES5, ES7, ES8, ES9, ES11, ES14, ES17, ES18	Project	Planning Division & Biological Monitor			
Bio-1H Construction Staging Areas. If it is confirmed through the implementation of mitigation measure Bio-1E that the CIP project would occur immediately adjacent to sensitive habitat areas and/or habitat potentially suitable for special status species, the City and CMWD shall design final CIP project construction staging areas such that no staging areas shall be located within sensitive habitat areas. The construction contractor shall receive approval by the City Planning & Engineering Divisions prior to mobilizations and staging of equipment outside of the project boundaries.	Sewer: N-3, N-9, SR-3, SR-9, SR-11, SR-12, SR-15, SR-17, SR-19, SR-22, SR-23, I-1 Water: 10, 17, 21, 47, 48, 55, R3, R5 Recycled Water: ES1, ES2, ES5, ES7, ES8, ES9, ES11, ES14, ES17, ES18	Project	Planning Division and Engineering Division			

Mitigation Measure		Applicable CIP Projects	Monitoring Type	Monitoring Department	Shown on Plans	Verified Implementation	Remarks
Bio-1I Contractor Training. If it is confirmed through the implementation of mitigation measure Bio-1E that the CIP project would occur immediately adjacent to sensitive habitat areas and/or habitat potentially suitable for special status species, the City and CMWD shall retain a qualified biologist to attend pre-construction meetings to inform construction crews of the sensitive resources and associated avoidance and/or minimization requirements.		Sewer: N-3, N-9, SR-3, SR-9, SR-11, SR-12, SR-15, SR-17, SR-19, SR-22, SR-23, I-1 Water: 10, 17, 21, 47, 48, 55, R3, R5 Recycled Water: ES1, ES2, ES5, ES7, ES8, ES9, ES11, ES14, ES17, ES18	Project	Planning Division & Biological Monitor			
Bio-2A Habitat Compensation for Projects within Cardemonstrated through the implementation of mitigation that applicable CIP projects could directly impact sensitive communities, including Habitat Groups A, B, C, D, E, and Table 11 and Section D.6 of the Carlsbad HMP, the City a implement the following:	measure Bio-1A ve natural F specified in	Sewer: N-3, N-9, SR-3, SR-9, SR-17, SR-19, SR-22, SR-23 Water: 10, 17, 55 Recycled Water: ES7	Project	Planning Division & Engineering Division			
Mitigation for unavoidable impacts to Habitat Group and F shall be provided according to the ratios specif consistent with Table 11 and Section D.6 of the Carls	ied below and						
HMP Habitat Mitigation Ratios							
Habitat Group and Type	Mitigation Ratio						
A. Coastal salt marsh, alkali marsh, freshwater marsh, estuarine, salt pan/ mudflats, riparian forest, riparian woodland, riparian scrub, vernal pools, disturbed wetlands, flood channel, Engelmann oak woodland, coast live oak woodland	No net loss; mitigation varies by type of replacement habitat						
B. Beach, southern coastal bluff scrub, maritime succulent scrub, southern maritime chaparral, native grassland	3:1						
C. Coastal sage scrub occupied by coastal California gnatcatcher	2:1						
D. Coastal sage scrub unoccupied by coastal California gnatcatcher, coastal sage/chaparral mix, chaparral (excluding southern maritime chaparral)	1:1						
E. Non-native grassland	0.5:1						
F. Disturbed lands, eucalyptus woodland, agriculture	0.01:1						
2. Impacts to Habitat Groups D, E, and F shall be mitiga Calavera City Mitigation Bank in accordance with App Carlsbad HMP for covered City projects that are eligi	oendix B of the						

	Mitigation Measure	Applicable CIP Projects	Monitoring Type	Monitoring Department	Shown on Plans	Verified Implementation	Remarks
ir	npacts at the Lake Calavera City Mitigation Bank.						
n p a	mpacts to Habitat Groups A, B, and C shall be avoided to the naximum extent practicable through project-level siting during CIP roject design and trenchless pipeline installation methods (e.g., jack and bore, horizontal directional drilling) during CIP project construction.						
ir fo	navoidable impacts to Habitat Groups A, B, and C shall be mitigated n-kind through implementation of any one or combination of the billowing measures, as approved and/or amended by the USFWS, ISACE, RWQCB, and/or CDFG, if applicable:						
а	. On site as creation of new habitat within avoided and preserved areas at the CIP project site;						
b	. On site as restoration of existing habitat within temporary impact areas and/or avoided and preserved areas at the CIP project site;						
С	On site as enhancement of existing habitat within avoided and preserved areas at the CIP project site;						
d	. Off site as purchase of habitat credits within an approved mitigation bank(s) (e.g., Carlsbad Oaks Conservation Bank, North County Habitat Bank);						
е	. Off site as habitat preservation, creation, restoration, and/or enhancement within other properties or approved mitigation programs available at the time of grading; or						
f.	A combination of the above.						
g	In the Coastal Zone, impacts to Habitat Groups A, B, and C shall be mitigated in accordance with the ratios described in Section D.7 of the HMP and shall include at a minimum a 1:1 creation (or substantial restoration when allowed) component to ensure no net loss of habitat. The remainder of the mitigation obligation may be satisfied pursuant to the provisions of the HMP. The proposed mitigation for impacts to Habitat Groups A, B, and C in the coastal zone is subject to review by the California Coastal Commission.						
	on- or off-site creation, restoration, and/or enhancement mitigation or habitat groups A, B, and C shall consist of the following:						
а	. For Habitat Group A types, including riparian and wetland						

	Mitigation Measure	Applicable CIP Projects	Monitoring Type	Monitoring Department	Shown on Plans	Verified Implementation	Remarks
	sensitive natural communities (e.g., riparian forest, riparian woodland, riparian scrub, disturbed wetlands, coast live oak woodland), the City or CMWD shall prepare a Riparian/Wetland Habitat Restoration Plan detailing the specific riparian/wetland creation, restoration, and/or enhancement measures to be implemented as project mitigation. The Riparian/Wetland Habitat Restoration Plan shall be approved by the USFWS, USACE, RWQCB, and/or CDFG, as appropriate, prior to vegetation clearing, grading, and/or construction activities.			·			
	b. For Habitat Group B types, including upland sensitive natural communities (e.g., maritime succulent scrub, southern maritime chaparral, native grassland), the City or CMWD shall prepare an Upland Habitat Restoration Plan detailing the specific upland habitat creation, restoration, and/or enhancement measures to be implemented as project mitigation. The Upland Habitat Restoration Plan shall be approved by the USFWS and CDFG prior to vegetation clearing, grading, and/or construction activities.						
	c. For Habitat Group C types (occupied Coastal Sage Scrub), the City or CMWD shall prepare a Coastal Sage Scrub Habitat Restoration Plan detailing the specific coastal sage scrub habitat creation, restoration, and/or enhancement measures to be implemented as project mitigation. The Coastal Sage Scrub Habitat Restoration Plan shall be approved by the USFWS and CDFG prior to vegetation clearing, grading, and/or construction activities.						
	d. The restoration plans for Habitat Groups A, B, and C shall include a five-year maintenance and monitoring program with a requirement to meet City/Wildlife Agencies approved success criteria.						
6.	Any upland or riparian/wetland habitat impacts that occur beyond the approved work limits of any CIP project shall be mitigated at a higher ratio to be negotiated with the USFWS, USACE, RWQCB, and/or CDFG.						
7.	If the Quarry Creek Master Plan project covering CIP projects N-9, 55, and ES7 is ultimately approved and developed, the City and CMWD shall implement the specific mitigation requirements of the Quarry Creek Master Plan EIR (EIR 11-02) accordingly.						

Mitigation Measure	Applicable CIP Projects	Monitoring Type	Monitoring Department	Shown on Plans	Verified Implementation	Remarks
Bio-2B Habitat Compensation for Projects Outside of Carlsbad. If it is demonstrated through the implementation of mitigation measure Bio-1A that CIP project 47 could directly impact sensitive natural communities, namely Diegan coastal sage scrub, CMWD shall compensate the loss of habitat according to the ratios provided below, which would be increased or decreased depending on where the compensatory mitigation would be located and whether the impacted habitat supports special status species or other sensitive resources:	Water: 47	Project	Planning Division & Biological Monitor			
Sensitive Natural Community Mitigation Ratio Diegan coastal sage scrub 1:1 – 2:1						
CMWD shall mitigate impacts to Diegan coastal sage scrub in accordance with the compensatory requirements outlined for Habitat Group C within measures 4, 5, 6, and 7 of mitigation measure Bio-2A.						
CULTURAL AND PALEONTOLOGICAL RESOURCES						
Cul-1 Cultural Resources Investigation. For the CIP projects proposed in close proximity to a known cultural resource or projects that would result in ground-disturbing activities in a previously undisturbed area, a project-level cultural resources investigation shall be conducted by a qualified cultural resource professional who meets the Secretary of the Interior's Professional Qualifications Standards for Archaeology. The cultural resources investigation shall include:	Sewer: SR-9, SR-12, SR-14, SR-19, SR-22, SR-23, N-3, N-9 Water: 10, 17, 47, 48, 55 Recycled Water: ES7	Project	Planning Division, Engineering Division, Qualified Cultural Resource Professional			
A CIP project site-specific review of the records search data at the South Coastal Information Center shall be conducted to determine if the CIP project site has been subjected to a professional survey.						
a. If a current cultural resources report addressing potential impacts on cultural resources is available, the City or CMWD shall implement the mitigation measures provided within the report. In the event that a current and valid report is not available or if the entirety of the CIP project site has not been professionally surveyed, then an updated records search shall be performed.						
b. The City or CMWD shall contact the NAHC and local tribal governments for input on the project in order to identify any additional Native American resources that may not be included in the records search.						

	Mitigation Measure	Applicable CIP Projects	Monitoring Type	Monitoring Department	Shown on Plans	Verified Implementation	Remarks
2.	For those CIP project site(s) not addressed by a current cultural resources report (produced within five years of project proposal), a project-level Phase I Cultural Resources Survey shall be prepared. Updates for all resources encountered during the Phase I survey shall be recorded using Department of Parks and Recreation (DPR) 523 forms in accordance with all applicable regulations. Resources shall be evaluated for significance and eligibility for inclusion in all applicable historic registers using methods such as, but not limited to, subsurface testing and/or archival research. Any subsurface testing would be monitored by an appropriate Native American representative.						
3.	In the event that such resources are found to be historical resources pursuant to CEQA, potential adverse impacts must be analyzed as stated in PRC Sections 21084.1 and 21083.2(I). Suitable mitigation for significant effects on archaeological resources are outlined in Section 15126.4(b)(3). The City or CMWD shall be responsible for implementing the methods for eliminating or substantially reducing impacts on resources as recommended by the archeologist and in consultation with the Native American Tribe. Such methods could include, but are not limited to:						
	a. Planning construction to avoid archaeological sites;						
	b. Incorporation of sites within parks, greenspace, or other open space;						
	c. Capping or covering a site with a layer of soil before building on the site;						
	d. Deeding the site into a permanent conservation easement;						
	e. Excavation (Data Recovery) of archaeological resources; and/or						
	f. Construction monitoring by a qualified professional and appropriate Native American monitors as identified through consultation with the NAHC or Native American Tribe. The monitor(s) shall be present at all pre-construction meetings.						
4.	If, as a result of Cul 1(3), it is determined that a CIP project site requires monitoring by a Native American Tribe, then the City or CMWD shall enter into a Pre-Excavation Agreement or Cultural Resource Treatment and Monitoring Agreement with the appropriate Native American Tribe prior to the commencement of earth disturbing activities.						

Mitigation Measure		Applicable CIP Projects	Monitoring Type	Monitoring Department	Shown on Plans	Verified Implementation	Remarks
5. If excavation (Data Recovery) is recommended as a all excavated Native American artifacts shall be repositive American Tribe of Most Likely Descendant (curated.	patriated to the						
6. The results of the cultural resources investigation sl into a technical report or memorandum and submit CMWD and the South Coastal Information Center.							
Pal-1 Paleontological Resources Investigation. For t projects which are located within the Santiago formatic		Sewer: N-9, N-12, SR-14, SR-22, SR-23, I-1	Project	Planning Division, Engineering			
paleontological resources investigation shall be conduct professional paleontologist in cooperation with the Cou and the San Diego Natural History Museum. The paleon resources investigation shall include:	inty of San Diego	Water: 10, 17, 48, F3		Division, Qualified Professional Paleontologist			
A review of the records search data for the City and area and, if necessary, an updated records search;	CMWD service						
2. Project-level pedestrian surveys of portions of the purples where paleontological resources could be encounted presence and depth of the sensitive formations;	•						
3. Formal evaluation of any potentially affected paleor resources to determine whether they qualify as uni paleontological resources; and	-						
4. Recommended measures to avoid, where feasible, is paleontological resources, such as preservation in paleontological resources, such as preservation in paleontological resources, such as preservation in paleontological sites into permanent conservation of planning parks, green space, or other open space to paleontological sites. Where avoidance or preservations feasible, excavation and curation may be recommendation.	lace, planning acing easements, or incorporate tion in place is not						
5. The results of the paleontological resources investig compiled into a technical report or memorandum a the City or CMWD for further coordination with the History Museum, as necessary.	nd submitted to						